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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,180	01/25/2002	Robert L. Irvine	396164	7575

7590 12/01/2004  
Robert L. Irvine  
11918 Westgate Circle  
Overland Park, KS 66213

EXAMINER
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CINTINS, IVARS C

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/057,180

Applicant(s)

IRVINE, ROBERT L.

Examiner

Ivars C. Cintins

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1724

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-29 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The following limitations do not appear to be supported by the disclosure originally filed, and hence constitute **new matter**:

- (1) that the regeneration section includes a "cool-down zone" (claim 1, line 35);
- (2) that the adsorption section includes a "terminal adsorption stage" (claim 1, line 41);
- (3) that the boiling range of the feedstream is less than "280" degrees centigrade (claim 3, line 3); and
- (4) that the solids leaving the recycle liquid desorption zone are limited to less than "220" degrees centigrade (claim 3, line 6).

If Applicant feels that the above noted limitations are supported by the original disclosure, then he should specifically point out, citing page and line, which portions of this disclosure provide such support.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The claims contain numerous vague and indefinite expressions. For example, the

Art Unit: 1724

term "effectively" (claim 1, line 37) is indeterminate in scope, and hence indefinite. The term "solids ... are limited to less than 220 degrees centigrade" (claim 3, line 6) is indefinite as to the limitation intended. The terms "the hydrogenated heteroatom" (claim 6, lines 5-6), "the succeeding lower stage" (claim 25, line 2) lack antecedent basis in the claims, and are therefore indefinite. The term "C5 to about 190 degrees centigrade are separated" (claim 8, lines 1-2) is vague, and indefinite as to the limitation intended. Similarly, the term "or other treatment" (claim 12, lines 4-5) is vague, and indefinite as to the limitation intended.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5-7 and 10-30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Irvine (U.S. Patent No. 5,730,860). The reference discloses a liquid purification process of the type recited, and further teaches utilizing adsorbent particles having the recited size (see col. 6, line 55) under conditions such that bed expansion is limited to 8% (see col. 12, line 13).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irvine. The reference discloses the claimed invention with the exception of the exact boiling

Art Unit: 1724


range of the feedstream constituents. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to treat a feedstream having the recited composition by the reference process, since this reference suggests (see col. 5, lines 45-57) that a wide variety of hydrocarbon streams may be treated by this process.

Applicant's arguments filed June 18, 2003 have been noted and carefully considered, but no longer appear to be relevant in view of the new grounds of rejection. Applicant should note, however, that the particle sizes disclosed in Irvine (i.e. 0.4 mm to 1.6 mm) correspond to a Tyler mesh size range of 10 to 35, and this is all that is required by the mesh size ranges recited in the claims of this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at (571) 272-1166.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ivars C. Cintins  
Primary Examiner  
Art Unit 1724

I. Cintins  
November 27, 2004